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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,321	07/31/2001	Douglas Michael Johnescu	FCI-2552/C27757 US	3732

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EXAMINER

LEON, EDWIN A

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 09/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,321

Applicant(s)

JOHNESCU ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22, and 29-30 is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8, 10-12, 15-18, 23, 24, 27 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 2-6, 9, 14, 25, 26, 28 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 7-8, 10-12, 15-18, 23-24, 27, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemke et al. (U.S. Patent No. 6,024,584). With regard to Claim 1, Lemke et al. discloses a modular mezzanine connector system, comprising: a plug assembly (430,432,434,436), comprising a first common base (432) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (440,438) defined within the first common base (432); a plug contact assembly (478,464,488) mounted within the plug assembly (430,432,434,436) comprising a plurality of plug contacts (478,464,488), each plug contact (478,464,488) comprising an end (upper part of (478,464,488)) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (440,438) of the first common base (432); a plug cover (436) coupled to the first common base (432); a receptacle assembly (330,324) that mates with the plug assembly (430,432,434,436), comprising a second common base (326) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed

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within a pocket (332,336,340) disposed within the second common base (326) and wherein the first common base (432) and the second common base (326) are substantially identical; a receptacle contact assembly (408) mounted within the receptacle assembly (330,324) comprising a plurality of receptacle contacts (408), each receptacle contact (408) comprising an end (386) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (332,336,340) of the second common base (326); a receptacle cover (330) that is coupled to the second common base (326) and that mates with the plug cover (436). See Figs. 24, 24a, and 25.

With regard to Claim 7, Lemke et al. discloses the plurality of plug and receptacle contacts (478,464,488, 408) are disposed in an in-line stripline configuration. See Figs. 24, 24a, and 25.

With regard to Claim 8, Lemke et al. discloses the plurality of plug contacts (478,464,488) and receptacle contacts (408) comprising signal contacts and are disposed in a row with each contact oriented perpendicular to a ground plane. See Figs. 24, 24a, and 25.

With regard to Claim 10, Lemke et al. discloses a method of making a modular mezzanine connector system to a desired stack height, comprising: inserting a plurality of plug contacts (478,464,488) into a first common base (432); coupling a plug cover (436) to the first common base (432) and if needed to meet the desired stack height attaching a spacer between the plug base and the plug cover (436); inserting a plurality of receptacle contacts (408) into a second common base (326); coupling a receptacle

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cover (330) to the second common base (326); and coupling the plug cover (436) to the receptacle cover (330) and thereby placing the plurality of plug contacts (478,464,488) into electrical communication with the plurality of receptacle contacts (408). See Figs. 24, 24a, and 25.

With regard to Claim 11, Lemke et al. discloses each of the fusible elements (484,470,492,404,398,400,406) comprising a solder ball. See Figs. 24, 24a, and 25.

With regard to Claim 12, Lemke et al. discloses that wherein inserting the plurality of plug contacts (478,464,488) further comprises inserting the plurality of plug contacts (478,464,488) in an in-line stripline configuration and wherein inserting the plurality of receptacle contacts (408) further comprises inserting the receptacle contacts (408) in an in-line stripline configuration. See Figs. 24, 24a, and 25.

With regard to Claim 13, Lemke et al. discloses that wherein inserting the plurality of plug contacts (478,464,488) further comprises inserting the plurality of plug contacts (478,464,488) in a row with each contact oriented perpendicular to a ground plane and wherein inserting the plurality of receptacle contacts (408) further comprises inserting the receptacle contacts (408) in a row perpendicular to a ground plane. See Figs. 24, 24a, and 25.

With regard to Claim 15, Lemke et al. discloses that wherein coupling the plug cover (436) to the first common base (432) comprises inserting a plurality of tabs (upper part of the contacts) extending from the first common base (432) into a plurality of channels (454,456,458) in the plug cover (436). See Figs. 24, 24a, and 25.

With regard to Claim 16, Lemke et al. discloses that wherein coupling the receptacle cover (330) to the second common base (326) comprises inserting a plurality of tabs (upper part of the contacts) extending from the second common base (326) into a plurality of channels (346) in the receptacle cover (330). See Figs. 24, 24a, and 25.

With regard to Claim 17, Lemke et al. discloses that wherein coupling the plug cover (436) to the receptacle cover (330) comprises inserting the receptacle cover (330) into an interior of the plug cover (436) in an interference fit. See Figs. 24, 24a, and 25.

With regard to Claim 18, Lemke et al. discloses that wherein coupling the plug cover (436) to the receptacle cover (330) comprises inserting the plurality of plug contacts (478,464,488) through slots in the receptacle cover (330) and into contact with a corresponding receptacle contact (408). See Figs. 24, 24a, and 25.

With regard to Claim 23, Lemke et al. discloses the plurality of plug contacts (478,464,488) and receptacle contacts (408) comprise rows of signal and ground contacts disposed in a pattern. See Figs. 24, 24a, and 25.

With regard to Claim 24, Lemke et al. discloses each plug ground contact (478,464,488) comprising a first lateral side and a second lateral side and wherein the receptacle ground contacts (408) within a row alternate mating with the first lateral side and the second lateral side of a ground plug contact (408). See Figs. 24, 24a, and 25.

With regard to Claim 27, Lemke et al. discloses coupling the plug cover (436) to the receptacle cover (330) and thereby placing the plurality of plug contacts (478,464,488) into electrical communication with the plurality of receptacle contacts (408) comprises mating each ground receptacle contact (408) in an alternating pattern

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with each plug ground contact (478,464,488) such that every other receptacle ground contact within a row of receptacle contacts (408) mates with a first lateral side of a plug ground contact (478,464,488) and the other receptacle contacts (408) with the row of receptacle contacts (408) mate with a second lateral side of a plug ground contact (478,464,488). See Figs. 24, 24a, and 25.

With regard to Claim 29, Lemke et al. discloses the receptacle assembly (330,324) further comprises a receptacle cover (330) having a member that extends along a midplane of the receptacle assembly (330,324) and that has a plurality of grooves (346,350,354) that receive a support member of a contact assembly (40) in order to center align each contact assembly (408). See Figs. 24, 24a, and 25.

With regard to Claim 33, Lemke et al. discloses an electrical connector system, comprising: a plug assembly (430,432,434,436), comprising a first common base (432) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (440,438) defined within the first common base (432); a plug contact assembly (478,464,488) mounted within the plug assembly (430,432,434,436) comprising a plurality of individual ground and signal plug contacts (478,464,488), each plug contact (478,464,488) comprising an end (upper part of (478,464,488)) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (440,438) of the first common base (432); a plug cover (436) coupled to the first common base (432); a receptacle assembly (330,324) that mates with the plug assembly (430,432,434,436), comprising a second common base (326) comprising a plurality of fusible elements

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(484,470,492,404,398,400,406) which are each disposed within a pocket (332,336,340) disposed within the second common base (326) and wherein the first common base (432) and the second common base (326) are substantially identical; a receptacle contact assembly (408) mounted within the receptacle assembly (330,324) comprising a plurality of individual ground and signal receptacle contacts (408), each receptacle contact (408) comprising an end (upper part of 408) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (332,336,340) of the second common base (326), each receptacle signal contact (408) mating one of the individual plug signal contacts (478,464,488) and each receptacle ground contact (408) mating one of the individual plug ground contacts (478,464,488); a receptacle cover (330) that is coupled to the second common base (326) and that mates with the plug cover (436). See Figs. 24, 24a, and 25.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemke et al. (U.S. Patent No. 6,024,584). Lemke et al. discloses the claimed invention except for the base comprising a plurality of diamond shaped pockets.

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However, it would have been obvious to make the pockets in diamond shape since applicants have presented no explanation that these particular configurations of the pockets are significant or are anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of receiving the fusible elements. A change in shape is generally recognizing as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

Allowable Subject Matter

5. Claims 2-6, 9, 14, 25-26, 28, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 19-22, and 29-30 are allowed.

The references fail to teach, disclose, or suggest, either alone or in combination, the plug assembly further comprising a spacer mounted between the plug cover and the first common base and the receptacle assembly further comprises a spacer mounted between the receptacle cover and the second common base, the pockets of the first and the second common base are disposed in an interstitial diamond configuration, the first and the second common base further comprise a recess disposed above each of the pockets through which a contact can be inserted, an adaptor which is mated to the plug cover and the receptacle cover, a plurality of diamond pockets disposed in an interstitial diamond configuration and there being a pocket beneath each recess so that

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a contact can extend through one of the recesses and into one of the pockets, the receptacle contact assembly further comprises a support member and the receptacle further comprises a member that runs along a midplane through the receptacle, the receptacle member having a groove so that the support member is inserted into the grooves in order to center align the receptacle contact assembly, the receptacle contact assembly comprises at least one row of individual contact beams that are disposed in a ground, signal, signal, ground pattern, and wherein the plug contact assembly comprises at least one row of individual contact beams disposed in a ground, signal, ground pattern, and wherein each adjacent two receptacle signal contact beams mate with one plug signal contact beam.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee et al. (U.S. Patent No. 4,045,105), Lemke et al. (U.S. Patent No. 6,164,983), Kabadi (U.S. Patent No. 6,097,609), and Umemura et al. (U.S. Patent No. 5,462,442) disclose .

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



THO D. TA
PRIMARY EXAMINER

Edwin A. Leon
AU 2833

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September 20, 2002